Information Architecture

Dario Bonino, Fulvio Corno

dario.bonino@polito.it
fulvio.corno@polito.it

What makes a web site good?

- *"...proper WWW site design is largely a matter of balancing the structure and relationship of menu, home pages, and individual content pages..."*
- *"...build a hierarchy of menus and pages that feel natural and well structured to the users..."*
- By Lynch, P.J. (1995) WWW Style Guide

Experience first, pay later...

- " Usability has assumed a much greater importance in the Internet economy than it has in the past... "
- The equation is simple:
  - *In product and software design customers pay first and experience usability later*
  - *On the web, users experience usability first and pay later*
- *It's very clear why usability is important for web design"*
  - By Nielsen, J. (1999) Designing Web Usability

Architecture analogy

- A building must:
  - Look good
  - Be usable (for working, living, playing, etc.)
  - Stand up
- A web site must:
  - Look good
  - Be usable (e.g., information must be findable)
  - Stay up (i.e., not crash)

Art vs Engineering

- Combination of art vs. engineering

- Same for I.A.

Crumbles...

- Buildings crumble...

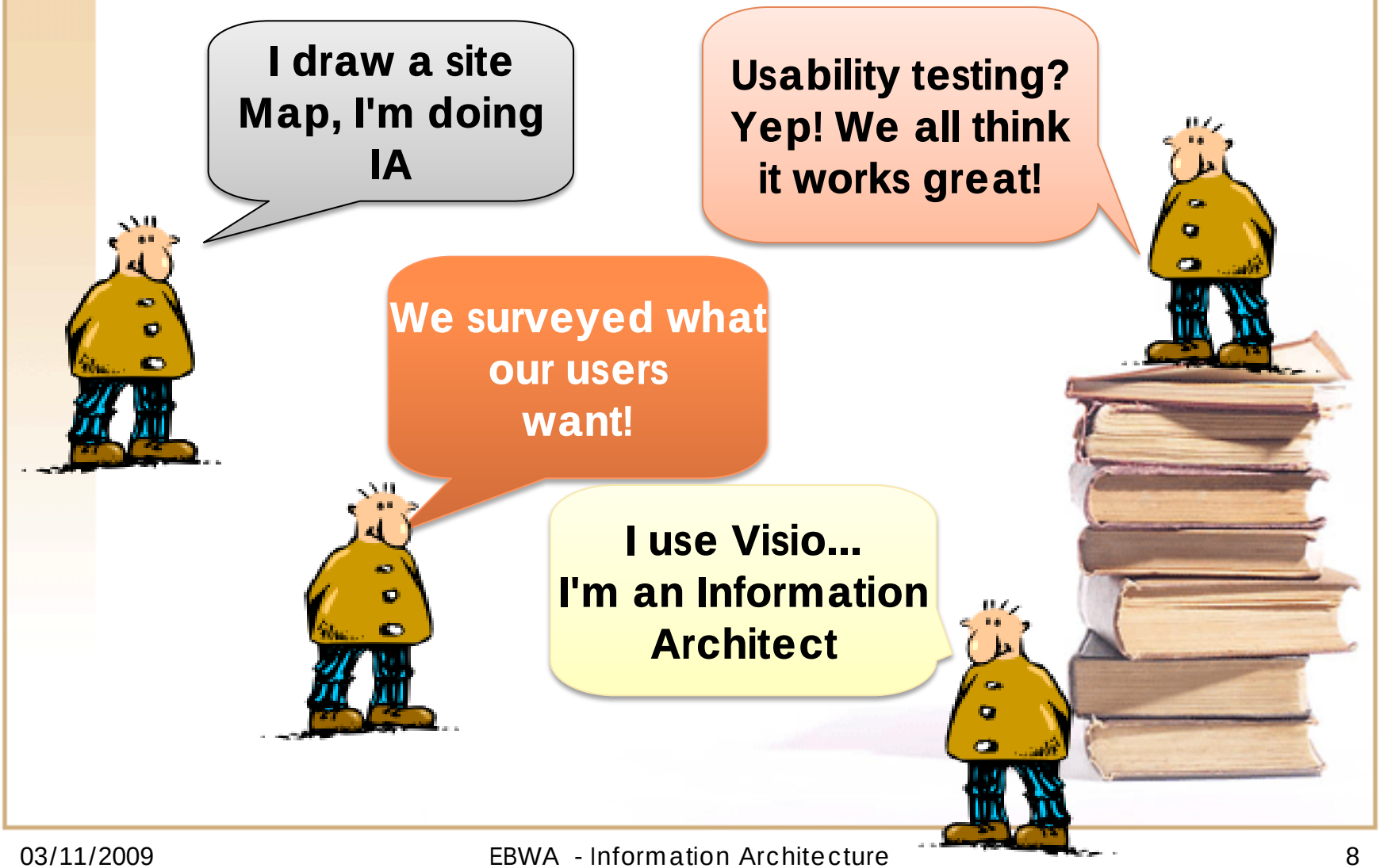
- Web site crumble
  - When you last encountered a broken link?

Pretty but unusable

- Building

- Web sites
  - http://www.cocacola.it/

So what you think IA is?



What IA is NOT

- Information Architecture is not:
  - Simply drawing up a sitemap
  - Simply pumping out masses of “wireframes”
  - Designing for ourselves
  - Only navigation
  - Frivolous expense for “Big Projects” only
  - A wish list item
  - A kind of database design

Information Architecture is ...

- "*the art and science of structuring, organizing and labeling information to help people find and manage information*"
  - By Louis Rosenfeld, Peter Morville, "Information Architecture for the World Wide Web", 3rd edition, November 2006.
- Balances the characteristics and needs of **users**, **content**, **context**.

Information Architecture is ...

- The practice of designing, for a website or intranet, the:
  - Site structure
  - Navigation
  - Labeling
- Sometimes is used as synonym for “User Centered Design”, which involves:
  - Understanding users and their needs
  - Designing with those needs in mind
  - Validating design decisions with user involvement

Basic design questions

Where I Am?
Where I can go?
What can I do?

More questions...

- How can I find something?
- What's available on this site?
- I know what I want, how can I find it?
- What happens now?
- How can I restart from scratch?
- I know what I want, how can I browse to reach it?
- ...

Real World Web Sites

- Do they answer questions?
  - Look at:
    - http://www.alexa.com/
    - http://www.youtube.com/
    - http://www.expedia.com
    - http://www.facebook.com/
    - http://www.bing.com/
    - http://www.foxnews.com/
    - http://news.bbc.co.uk/
    - http://www.pixmania.com
    - http://www.microsoft.com/en/us/default.aspx
    - http://www.dell.com

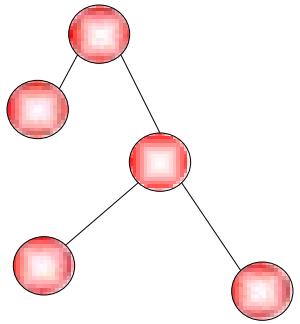
The 3 pillars of IA (1/2)

- ✓ Structure
- ✓ Labeling
- ✓ Navigation

The 3 pillars of IA (2/2)

- Site Structure
  - Categorization
  - Classification
  - Hierarchy
- Navigation
  - Accessing the site structure
  - “Findability”
- Labeling
  - Naming sections, links, navigation, etc.

IA components (1/3)



- Structure
  - The main organization of the site content (taxonomies)
- Navigation

  - Site-wide navigation
    - Where I am?
    - Where I can go?
  - Local navigation
    - Navigation inside a
    - web site section

IA components (2/3)

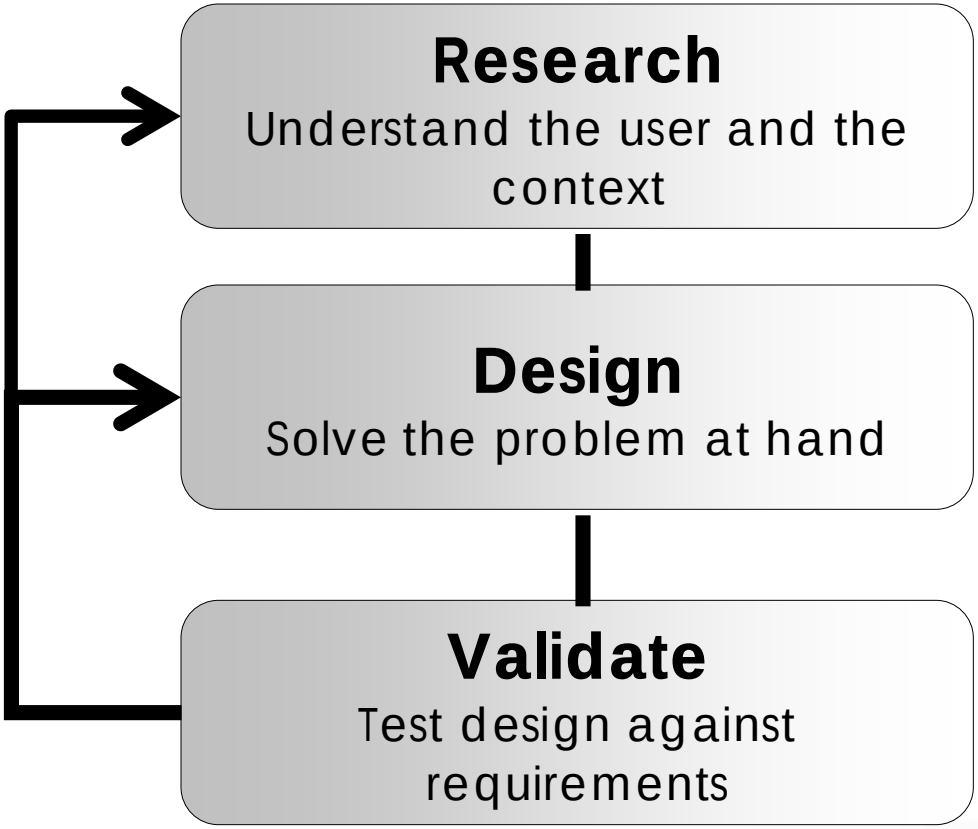
- Navigation (continued...)
  - Breadcrumbs
  - Site Map / Summary
    - Summary of the site content and link to site sections and subsections
    - Usually in form of taxonomic schema
  - Site Index
    - Links in alphabetical order
  - Site guide
    - Offers specific information about specific site aspects

IA components (3/3)

- Labeling
  - Controlled vocabularies
    - Domain specific terms
  - Thesaurus
    - Term descriptions
    - Links between terms: synonyms, antonyms, meronyms, etc.

Jaguar?

General IA process (1/3)



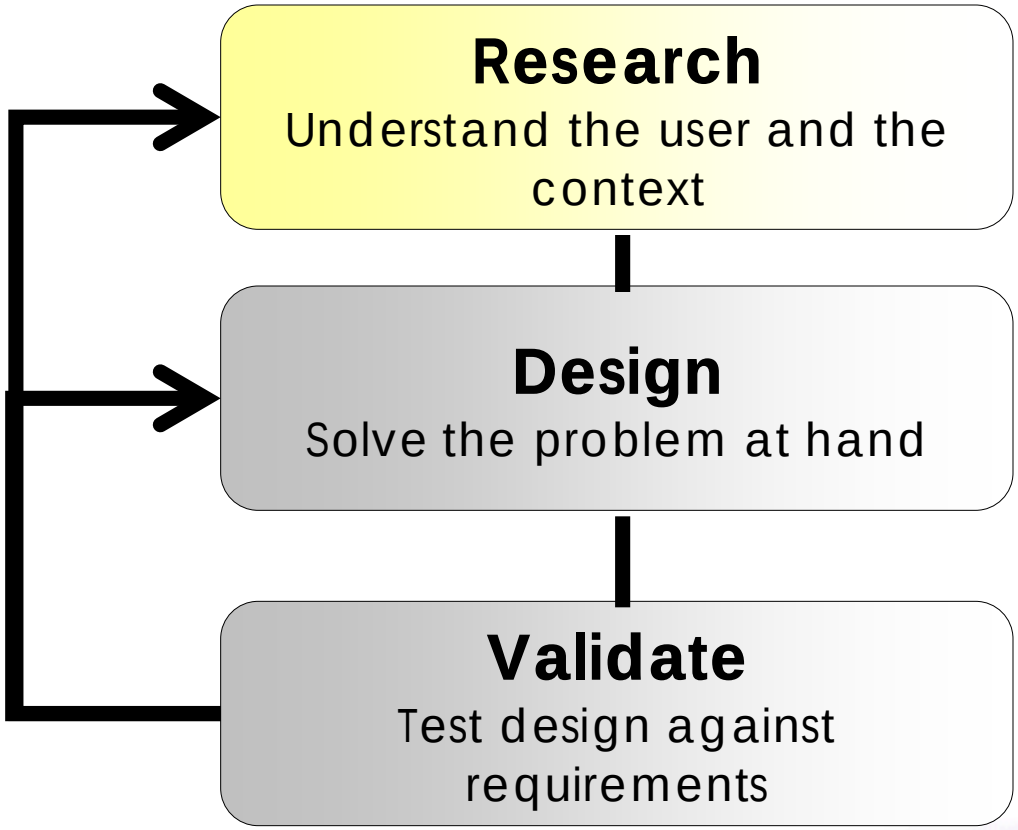
General IA process (2/3)

- Research
  - User research
  - Business objectives
  - Conventions and best practices (de facto standards)
- Design
  - Use knowledge of users
  - Involve them in the process
  - Balance user needs, business objectives and possible content

General IA process (3/3)

- Validate
  - Usability testing and iterative design

General IA process



Research

- Get out and understand your users
  - What do they need?
  - What do they want?
  - How do they use technology?
  - How might they use your web site?
  - What information they need?

User Research Techniques

User Research Techniques

- Many activities
  - Interviews, expert review, heuristic review
  - Surveys, focus groups and other market research techniques
  - Competitor analysis, best practice review
  - Ethnographic activities such as contextual inquiry (site visit) and diary studies
  - Web analytics, search engine logs, CRM (Customer Relationships Management), sales data analysis

Something about...

I want to do some Sightseeing

I need to go to Dayton for a conference

I need to book the flight and the hotel

I don't know what the city has to offer

Lucy

Lucy...

- User research
  - we meet Lucy
  - Lucy is in the target audience for a travel web site (e.g., ww.expedia.com)
  - Lucy is a young researcher in biology
  - Lucy uses the web a fair bit

And...

We need to drive traffic to the destination X

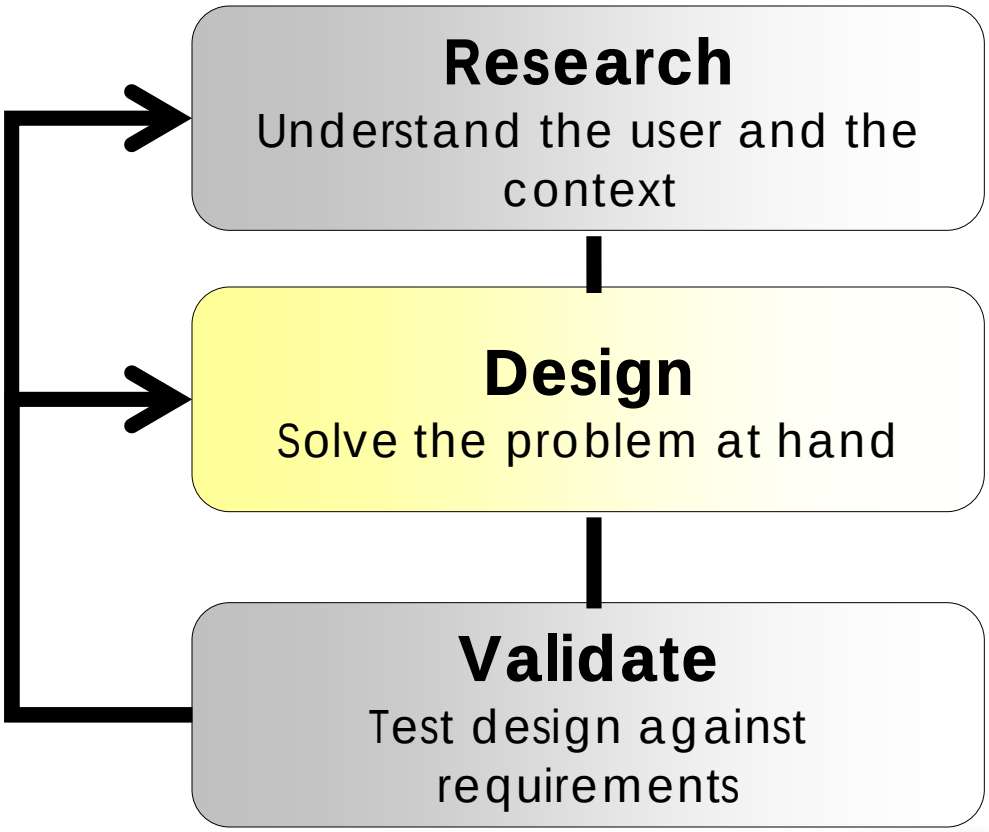
What content do we already have?

Craig

Other research tasks

- Need to consider more than users
  - Business Stakeholders (as Craig)
  - Business Objectives
  - Web site goals
  - The context we have to design in:
    - Content inventory
    - Already deployed solutions
    - **avoid the re-build from scratch temptation!**

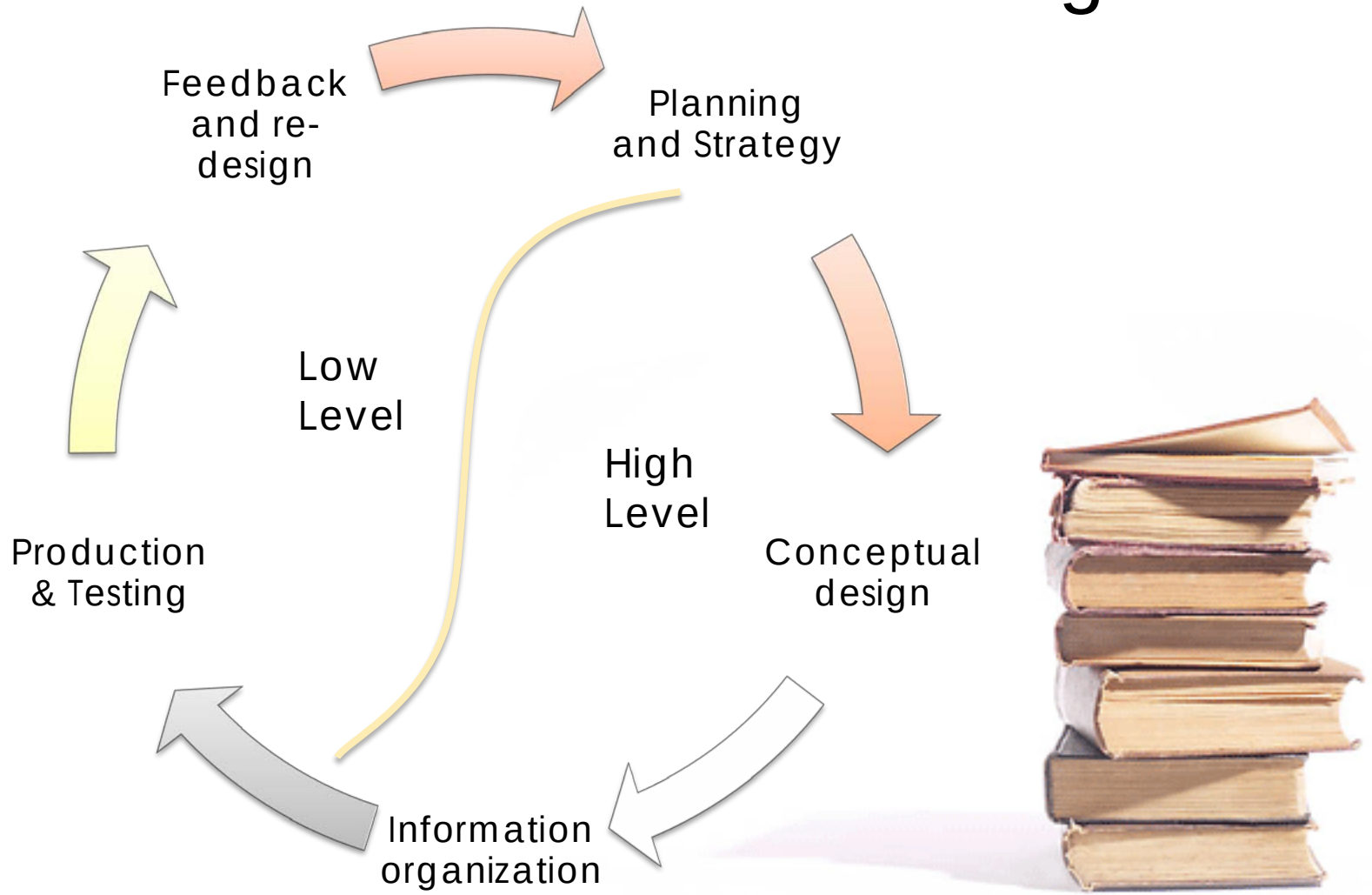
General IA process



Design

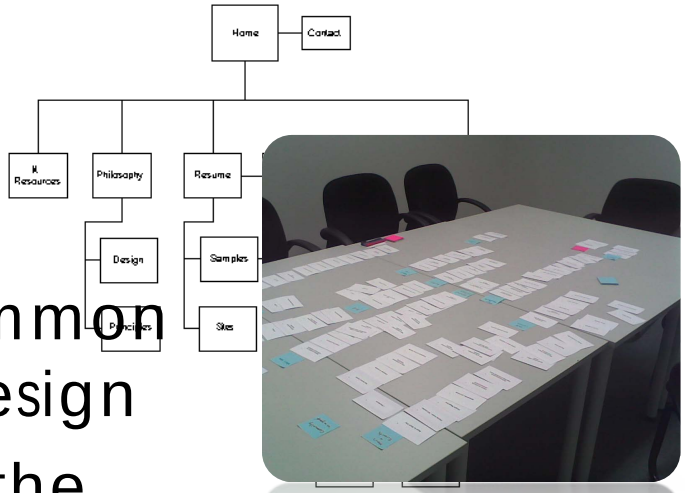
- Inputs:
  - Existing knowledge
    - Categorization schemes (e.g., alphabetical, chronological, geographical, by subject/topic)
    - Conventions (e.g., search box on the top right)
  - Research outcomes
    - Needs and behavior of audience
    - Practical limitations on content and technology
    - Business drivers and requirements

Two main levels in IA design



High Level design

- Many approaches
  - A site map is most common output of high level design
  - Card sorting is one of the most adopted techniques
  - It's a cross-border task between research and design



Designing the travel web site...

- Home
  - Guides
    - International Vacations
    - Domestic Vacations
  - Packages
  - Book now
    - Are you also interested in?

Designing the travel site

- Existing knowledge
  - Categorization schemes (alphabetical, chronological, geographical, by subject/topic)
  - Travel content → geographical
- Input from Research
  - Needs and behavior of the target audience
  - Results of card sorting
  - Business objectives and political drivers
- Draft information architecture

Low level design

Page notes

This section contains all the information which staff would need as employees of XYZ.

This is a first level intermediate page. Its purpose is to guide, direct and funnel staff towards the content they need.

So it's essential that they are able to determine which link to follow next.

Get straight into it

Intermediate pages should be kept free of 'happy talk'. Text that introduces a section or gives instruction is a waste of space and will probably never be read. A better strategy is to craft categories and navigation so that users are able to quickly and easily find their way to the content they need.

Information scent

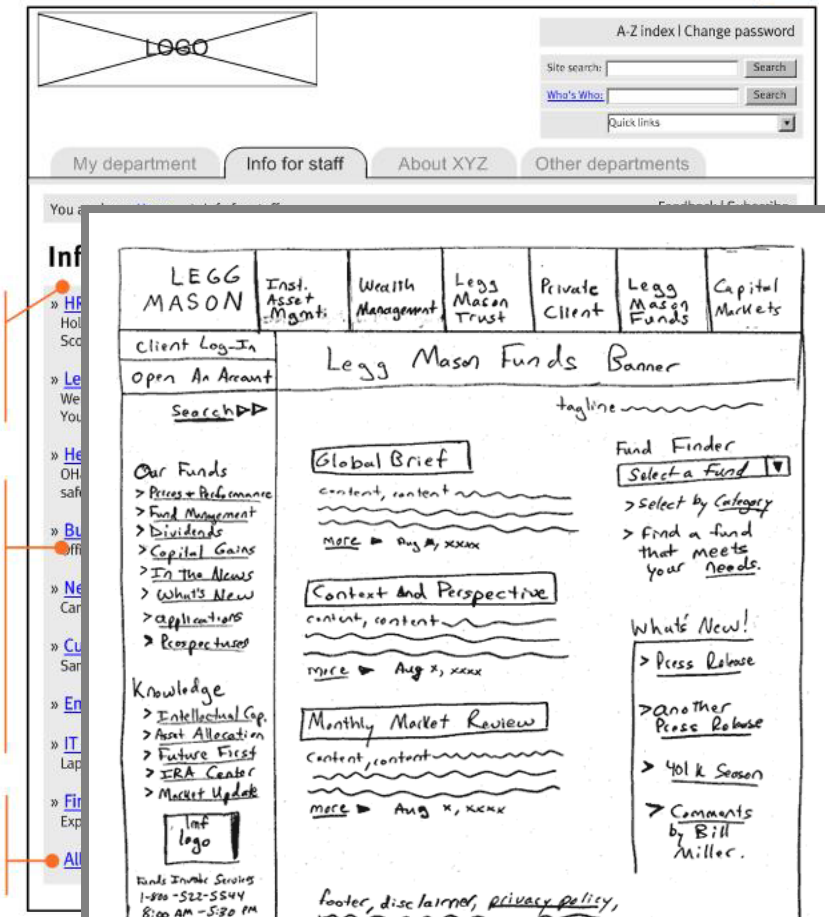
To help staff decide which path to follow (which category to click on) keywords are placed under each category on these route pages. These keywords should reflect the key tasks or concepts which staff associated with each category.

At times the hierarchy represented here may not adhere to the company's official structure or areas of responsibility, but that's precisely the point. The categorisation shown here reflects a view shared by most staff.

Category names have been chosen to deliberately move away from the names of departments within Canon.

Alternative approach

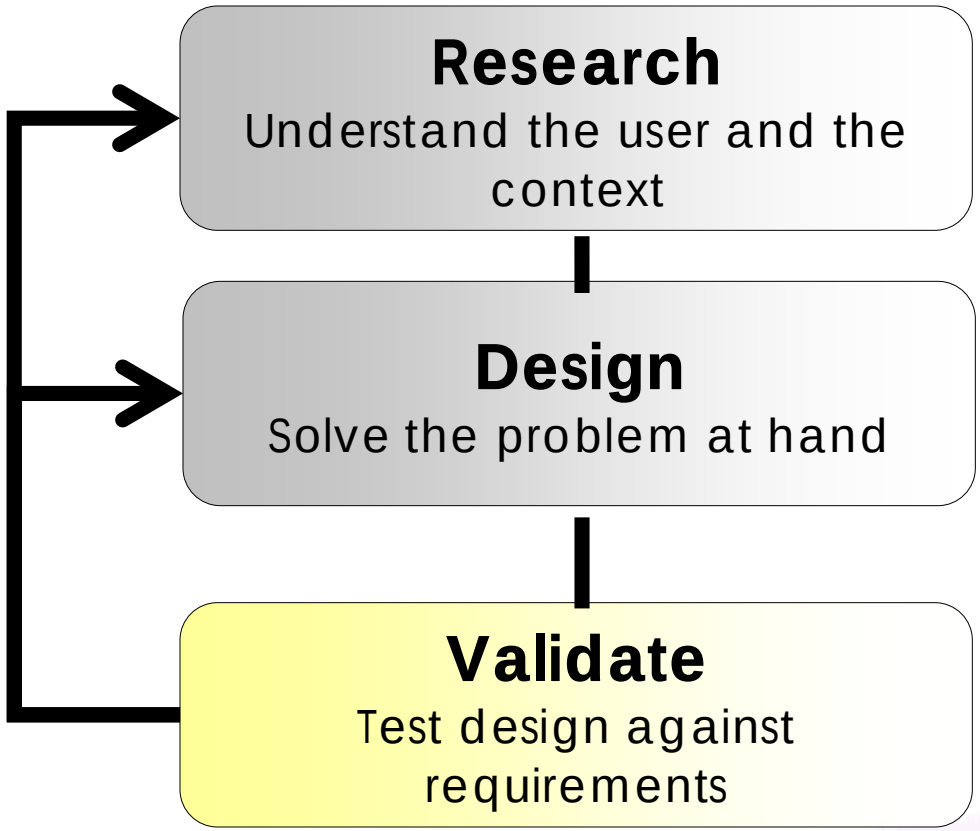
Many staff requested one place for forms and would primarily look for a form in that spot. This is alongside those staff who would look for a form according to the subject/topic it relates to (which is facilitated by the links above).



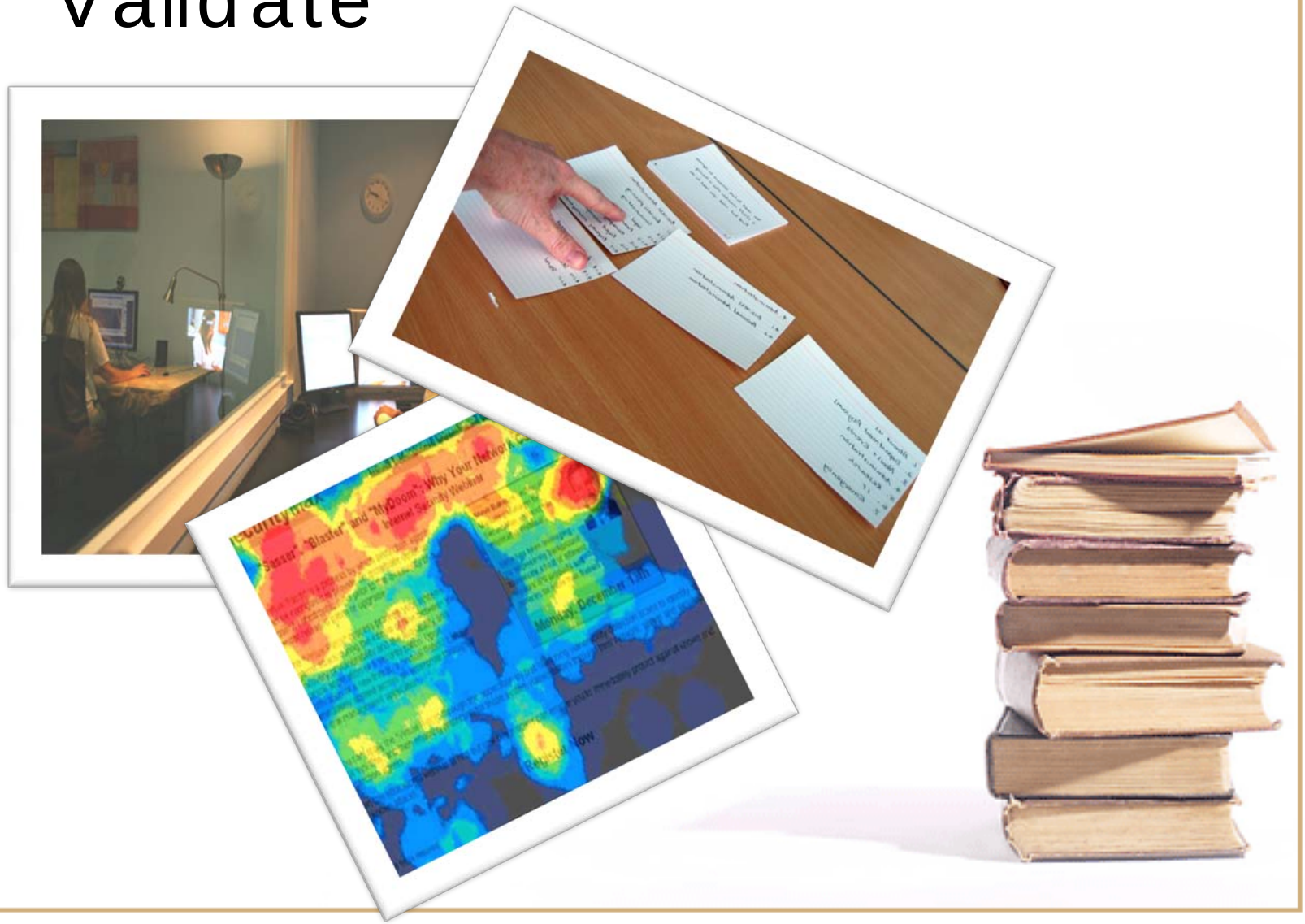
Low Level IA activities

- Many approaches to design
  - Wireframes are the most common
  - Conventions
  - Design patterns may be useful
  - Strength and weaknesses of the adopted platform shall be took into account
  - ...

General IA process



Validate



Usability evaluation (1/2)

- Realistic user groups
- Well defined tasks
- Observation of user behavior
- Questionnaires
- Think aloud
- **It's a very complex discipline!**

Usability evaluation (2/2)